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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/650,073	08/29/00	COLEMAN	G 97-676.5

000719
CATERPILLAR INC.
100 N.E. ADAMS STREET
PATENT DEPT.
PEORIA IL 61629-6490

IM22/1227

EXAMINER

TOOMER, C

ART UNIT	PAPER NUMBER
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1714

2

DATE MAILED:

12/27/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/650073

Applicant(s)

Examiner

Group Art Unit

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☐ Responsive to communication(s) filed on _____.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-45 is/are pending in the application.
- ☐ Of the above claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-45 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1 7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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DETAILED ACTION

Specification

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification and to determine that all claim limitations have support in the specification.

Claim Rejections - 35 USC § 112

2. Claims 1-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claims 9, 10, 12, 14, 15, 16, 29, 30, 35, 36, 37 and 38 contain trademark/trade names. Where a trademark or trade name is used in a claim as a limitation to identify or describe a particular material or product, the claim does not comply with the requirements of 35 U.S.C. 112, second paragraph. See *Ex parte Simpson*, 218 USPQ 1020 (Bd. App. 1982). The claim scope is uncertain since the trademark or trade name cannot be used properly to identify any particular material or product. A trademark or trade name is used to identify a source of goods, and not the goods themselves. Thus, a trademark or trade name does not identify or describe the goods

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associated with the trademark or trade name. In the present case, the trademark/trade name is used to identify/describe surfactants and, accordingly, the identification/description is indefinite.

Claims 1-45 are rejected because the claims lack proportions. In the absence of proportions, the metes and bounds of the claims cannot be determined.

Claim 31 is rejected because it is not an EO/PO block copolymer, as is required in claim 28.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-8, 11, 13, 17-28 and 32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin (US 5,284,492).

Dubin teaches a fuel oil emulsion (o/w or w/o) comprising a fuel oil (diesel), 5-50% demineralized water and an emulsification system. The droplet size is below 5 microns. The emulsification system is present in the emulsion in an amount from 0.05 to 5.0 % by weight. The emulsification system comprises an alkanolamide (oleic diethanolamide), a phenolic surfactant (polymeric dispersant) and a block polymer (see abstract; col. 3, lines 41-44, 58-66; col. 4, lines 11-15, 23-44; col. 5, lines 7-59 and claims 5-12). The emulsification system may also

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contain stabilizers (see col. 6, lines 54-64). Dubin teaches the limitations of the claims other than the differences which are discussed below.

Dubin differs from the claims in that he does not specifically teach the proportions of the individual surfactants. However, he does teach that the emulsification system is contained in the emulsion in an amount from 0.05 to 5.0% by weight and he teaches the proportions of the surfactants contained in the system. Therefore, it would have been obvious to one of ordinary skill in the art to have optimized the proportions through routine experimentation to obtain the best results.

6. Claims 39 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin further in view of Genova et al (US 5,259,851).

Dubin fails to teach that the composition of his invention contains an anti-freeze agent and a cetane improver. However, no unobviousness is seen in this difference because Genova teaches that fuel compositions, such as those taught by Dubin, may contain these conventional additives (see abstract; col. 3, lines 40-47).

It would have been obvious to one of ordinary skill in the art to have included anti-freeze agents and cetane improvers in the composition of Dubin because Genova teaches that these are conventional diesel fuel additives and that they would perform their attendant functions.

7. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin and Genova further in view of Wenzel (US 4,002,435).

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The prior art teaches that it is conventional for fuel compositions to contain anti-freeze agents. However, the prior art fails to teach which specific compounds are used for this purpose. Wenzel teaches that methanol and ethanol are used in emulsion fuels to provide antifreeze characteristics to the fuel (see col. 4, lines 42-53). It would have been obvious to one of ordinary skill in the art to have included methanol as an anti-freeze agent in the composition of Dubin because Wenzel teaches that the alcohol would allow the fuel to be stable below the freezing point of the water which is contained in the emulsion.

8. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin and Genova further in view of Schwab (US 5,669,938).

Dubin and Genova fail to teach the specific cetane improvers; however, Schwab teaches this difference. Schwab teaches that w/o emulsions of diesel fuel contain 2-ethylhexyl nitrate and hydrocarbyl peroxides as ignition improvers (see abstract and col. 1, lines 5-30).

It would have been obvious to one of ordinary skill in the art to have included the ignition improvers of Schwab in the composition of Dubin because Schwab teaches that emulsion fuels suffer from a substantial reduction in cetane number and that the nitrates and peroxides help to overcome this problem.

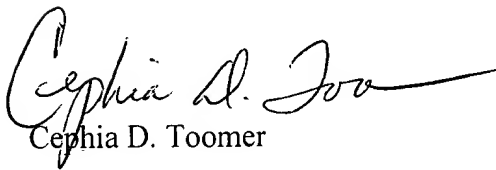
9. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dubin and Genova further in view of European Patent Application 475 620 ("EPA").

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Dubin and Genova fail to teach the specifics of the cetane improver; however, EPA teaches this limitation. EPA teaches that oxidizing agents, such as ammonium nitrate, improve the cetane number of emulsion fuels (see page 2, lines 19-42).

It would have been obvious to one of ordinary skill in the art to have included the ignition improver of EPA in the composition of Dubin because EPA teaches that emulsion fuels suffer from a substantial reduction in cetane number and that the oxidizing agents (ammonium nitrate) help to overcome this problem.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia Toomer whose telephone number is (703) 308-2509.



Cephia D. Toomer

Patent Examiner-1700

cdt/09650073.1

December 23, 2000